

### **REMARKS**

This Amendment is responsive to the communication of June 15, 2005. Reconsideration of **Claims 1-4, 7-14, and 17-22** is respectfully requested.

### **The Office Action**

**Claims 1-20** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hutchison (US Patent No. 6,527,422).

**Claims 21-22** have been added to alternatively claim certain aspects of the applicants' concepts.

### **Amendments to Specification**

The specification has been amended to alleviate minor mistakes. Amendments to specification do not represent any new subject matter.

### **Claims Distinguish over Cited Prior Art**

**Claim 1** calls for among other elements: at least one sensor set to detect an external light load directed to the light emitting surface and generate a control signal indicative of a presence of the light load; and an electrical control system for receiving the control signal indicative of the presence of the light load and triggering an increase in current being supplied to the at least one LED in response to the received control signal which increased current is being maintained for at least while the light load is present.

**Hutchison** is directed to controlling the light output of the LEDs over time to prevent overdrive of the LEDs and predict failure of the light source. (Col. 3, lines 23-26). Diodes PD1 sense ambient light while diodes PD2 sense generated light. Diodes PD1, PD2 provide means for electronic filtering of the generated light and the ambient light. (Col. 10, lines 11-19). Based on the sensed intensity of the light emitted by the LEDs, the LEDs are driven to ensure a constant light output from the lighting apparatus. (Col. 10, lines 29-32). E.g., because the intensity of the LEDs degrades over time, the LEDs are driven at the increased drive current to provide a brighter light. (Col. 10, lines 40-42). First, Hutchison does not show a control system which triggers the increased current in response to receiving the signal which indicates a presence of an external light load as set forth in claim

1. The increased current of Hutchison is triggered in response to reduced intensity of the LEDs. Second, Hutchison does not show that the increased current is being maintained for while the external light load is present. The increased current in Hutchison is maintained for as long as the LEDs exhibit degraded performance. Hutchison does not disclose either explicitly or inherently the lighting system in which the increased current (1) is triggered when the external load is sensed; and (2) is supplied to the LEDs for as long as the external light load is present as set forth in claim 1. It is therefore respectfully submitted that **claim 1 and dependent claims 2-3 and 7-10** distinguish patentably and unobviously over Hutchison.

Regarding **claim 4**, in addition to its relationship to claim 1, claim 4 calls for among other elements: sensor is positioned in a location remote from the printed circuit board. Such remote positioning of the sensor has an advantage of better aligning the sensor towards oncoming external illumination. It is asserted in the Office Action that the Hutchison describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 10, lines 63-67 and col. 11, lines 1-2, in which positioning the sensor remotely from the board, on which the LEDs are positioned, is not found. Upon cursory review of the entire reference such limitation is still not found. Nowhere does Hutchison disclose or suggest positioning the sensor remotely from the board on which the LEDs are positioned. If the Examiner maintains this assertion, Applicants request the Examiner to point out where exactly in the reference such limitation can be found. It is therefore respectfully submitted that **claim 4** distinguishes patentably and unobviously over Hutchison.

Regarding **claim 7**, in addition to its relationship to claim 1, claim 7 calls for among other elements: the current is continuous. It is asserted in the Office Action that the Hutchison describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 10, lines 21 and 37, in which the application of the continuous increased current is not found. Upon cursory review of the entire reference application of continuous increased current is not found either. To the contrary, Hutchison describes strobing the LEDs to discern the LED light from the ambient light. (Col. 10, lines 17-19).

Nowhere does Hutchison disclose or suggest supplying an elevated continuous current to the LEDs. If the Examiner maintains this assertion, Applicants request the Examiner to point out where exactly in the reference such limitation can be found. It is therefore respectfully submitted that **claim 7** distinguishes patentably and unobviously over Hutchison.

Regarding **claim 9**, in addition to its relationship to claim 1, claim 9 calls for among other elements: the current is raised by pulsing the current at a frequency higher than visually perceivable. It is asserted in the Office Action that the Hutchison describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 10, lines 54-55, in which the duty cycle of 50% is described. The duty cycle of 50% does not define a visually perceivable frequency as the 50% duty cycle may be any frequency. Nowhere does Hutchison disclose or suggests that the current is raised by pulsing the current at a frequency higher than visually perceivable. It is therefore respectfully submitted that **claim 9** distinguishes patentably and unobviously over Hutchison.

**Claim 11** calls for among other limitations: in response to detecting a presence of the light load, generating a control signal indicative of detecting the light load; receiving the control signal by an electrical control system; triggering an increase in current being supplied to the at least one LED in response to receiving the control signal; and maintaining the elevated current for at least while the light load is being present.

**Hutchison** is directed to controlling the light output of the LEDs over time to prevent overdrive of the LEDs and predict failure of the light source. (Col. 3, lines 23-26). Diodes PD1 sense ambient light while diodes PD2 sense generated light. Diodes PD1, PD2 provide means for electronic filtering of the generated light and the ambient light. (Col. 10, lines 11-19). Based on the sensed intensity of the light emitted by the LEDs, the LEDs are driven to ensure a constant light output from the lighting apparatus. (Col. 10, lines 29-32). E.g., because the intensity of LEDs degrade over time, the LEDs are driven at the increased drive current. (Col. 10, lines 40-42). First, Hutchison does not show triggering the increased current in response to receiving the signal which indicates presence of a light load as set forth in claim 11. The increased current of Hutchison is triggered in response to

reduced intensity of the LEDs. Second, Hutchison does not show maintaining of the increased current while the external light load is present as set forth in claim 11. The increased current in Hutchison is maintained for as long as the LEDs exhibit degraded performance. Hutchison does not disclose either explicitly or inherently (1) triggering the increased current when the external load is sensed; and (2) supplying the increased current to the LEDs for as long as the external light load is present. It is therefore respectfully submitted that **claim 11 and dependent claims 12-14 and 17-20** distinguish patentably and unobviously over Hutchison.

Regarding **claim 14**, in addition to its relationship to claim 11, claim 14 calls for among other elements: mounting the sensor in a location remote from the printed circuit board. It is asserted in the Office Action that the Hutchison describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 10, lines 63-67 and col. 11, lines 1-2, in which positioning the sensor remotely from the board, on which the LEDs are positioned, is not found. Upon cursory review of the entire reference such remote positioning of the sensor is not found either. Nowhere does Hutchison disclose or suggest positioning the sensor remotely from the board on which the LEDs are positioned. If the Examiner maintains this assertion, Applicants respectfully request the Examiner to point out where exactly in the reference such limitation can be found. It is therefore respectfully submitted that **claim 14** distinguishes patentably and unobviously over Hutchison.

Regarding **claim 19**, in addition to its relationship to claim 11, claim 19 calls for among other elements: raising the current by pulsing the current at a frequency higher than visually perceivable. It is asserted in the Office Action that the Hutchison describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 10, lines 54-55, in which the duty cycle of 50% is described. The duty cycle of 50% does not define a visually perceivable frequency as the 50% duty cycle may be any frequency. Nowhere does Hutchison disclose or suggest that the current is raised by pulsing the current at a frequency higher than visually perceivable. It is therefore respectfully submitted that **claim 19** distinguishes patentably and unobviously over Hutchison.



### CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (**Claims 1-4, 7-14, and 17-22**) are now in condition for allowance.

Respectfully submitted,

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8-30-05  
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#### CERTIFICATE OF MAILING

Under 37 C.F.R. § 1.8, I certify that this Amendment A is being

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